



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/728,411

12/05/2003

Tai-Yan Kam

3304.2.103

9733

21552

7590

10/04/2004

MADSON & METCALF
GATEWAY TOWER WEST
SUITE 900
15 WEST SOUTH TEMPLE
SALT LAKE CITY, UT 84101

EXAMINER

LE, HUYEN D

ART UNIT

PAPER NUMBER

2643

DATE MAILED: 10/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/728,411

Applicant(s)

KAM, TAI-YAN

Examiner

HUYEN D. LE

Art Unit

2643

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 8-17 is/are rejected.
- 7) ☒ Claim(s) 7 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Objections

1. Claim 4 is objected to because of the following: in line 2, "(Ochroma spp.)" should be deleted. Appropriate correction is required.

Specification

2. The disclosure is objected to because of the following informalities: the slots "211" on pages 8-10 should be changed to --212--.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-6 and 8-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Azima et al. (U.S. patent 6,618,487) in view of Azima et al. (U.S. patent 6,192,136) or Azima et al. (U.S. patent 6,332,029).

Regarding claims 1-2, 6, 8-10, 13 and 16-17, Azima'487 teaches a panel-form loudspeaker (figures 1, 2, 3) that comprises a radiating panel (2), a transducer (1) comprising a voice coil unit (3, 4), a magnet unit (5, 6, 7, 8, 21, 22) and a linkage unit (figures 4, 5, 6, 9, 10, 11) as claimed.

Art Unit: 2643

Azima'487 does not specifically show a frame and a suspension unit as claimed.

However, it is very well known in the art to provide a suspension unit and a frame for supporting the radiating panel.

Azima'136 or Azima'029 teaches a frame (1, 6) and a suspension unit (3, 17) that is supported to the radiating panel (2).

Therefore, it would have been obvious to one skilled in the art to provide a frame and a suspension unit, as taught by Azima'136 or Azima'029, at the edge of the panel (2) of Azima'487 for better supporting to the radiating panel.

Further, as broadly claimed, Azima'487 teaches the linkage unit (12, figures 9, 10) that comprises a first linking portion (29, 35, 36, 38) coupled to the frame (1) through the panel (2), a second linking portion (9, 17, 18, 28) coupled to the coil unit (3, 4) through a resilient suspension (11, 28) and a third linking portion (12, 30, 37) coupled to the magnet unit (6, 8).

Regarding claim 3, Azima '029 teaches a diaphragm as claimed (col. 24, lines 1-7).

Regarding claims 4-5, Azima'487 in view of Azima'136 and Azima'029 do not specifically teach the material for the core and the layer as claimed. However, Azima'029 does not restrict to any type of material for the panel (see col. 24).

Therefore, it would have been obvious to one skilled in the art to provide any material for the core and the layer for the panel (2) such as Balsa wool for the core and polymeric resin for the layer for the improved frequency characteristics.

Regarding claim 11, Azima'487 does not teach a binder as claimed. However, Azima'487 does show a connection between the magnet assembly (6, 22) and the third linking

Art Unit: 2643

portion (12, 37). Further, providing a binder or an adhesive for connecting the parts in the speaker is known in the art.

Therefore, it would have been obvious to one skilled in the art to provide any securing means such as a binder for better securing the linking portion of the coupling member (12) to the magnetic assembly.

Regarding claim 12, Azima'487 shows the hole as claimed (figures 6, 9 and 11).

Regarding claims 14-15 and 17, Azima'029 does not specifically shows a suspension that has a first part, a second part and a raised part as claimed. However, providing a suspension with a raised part between the first and second parts coupled to the frame and the panel is very well known in the art.

Therefore, it would have been obvious to one skilled in the art to provide the suspension (3), as shown by Azima'029, having a raised part between the first and second parts that are coupled to the frame and the panel, respectively for providing a better suspension to the panel.

Allowable Subject Matter

5. Claim 7 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Art Unit: 2643

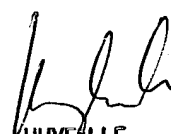
6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to HUYEN D. LE whose telephone number is (703) 305-4844. The examiner can normally be reached on 9:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, CURTIS KUNTZ can be reached on (703) 305-4708. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



HL
September 29, 2004


HUYEN LE
PRIMARY EXAMINER